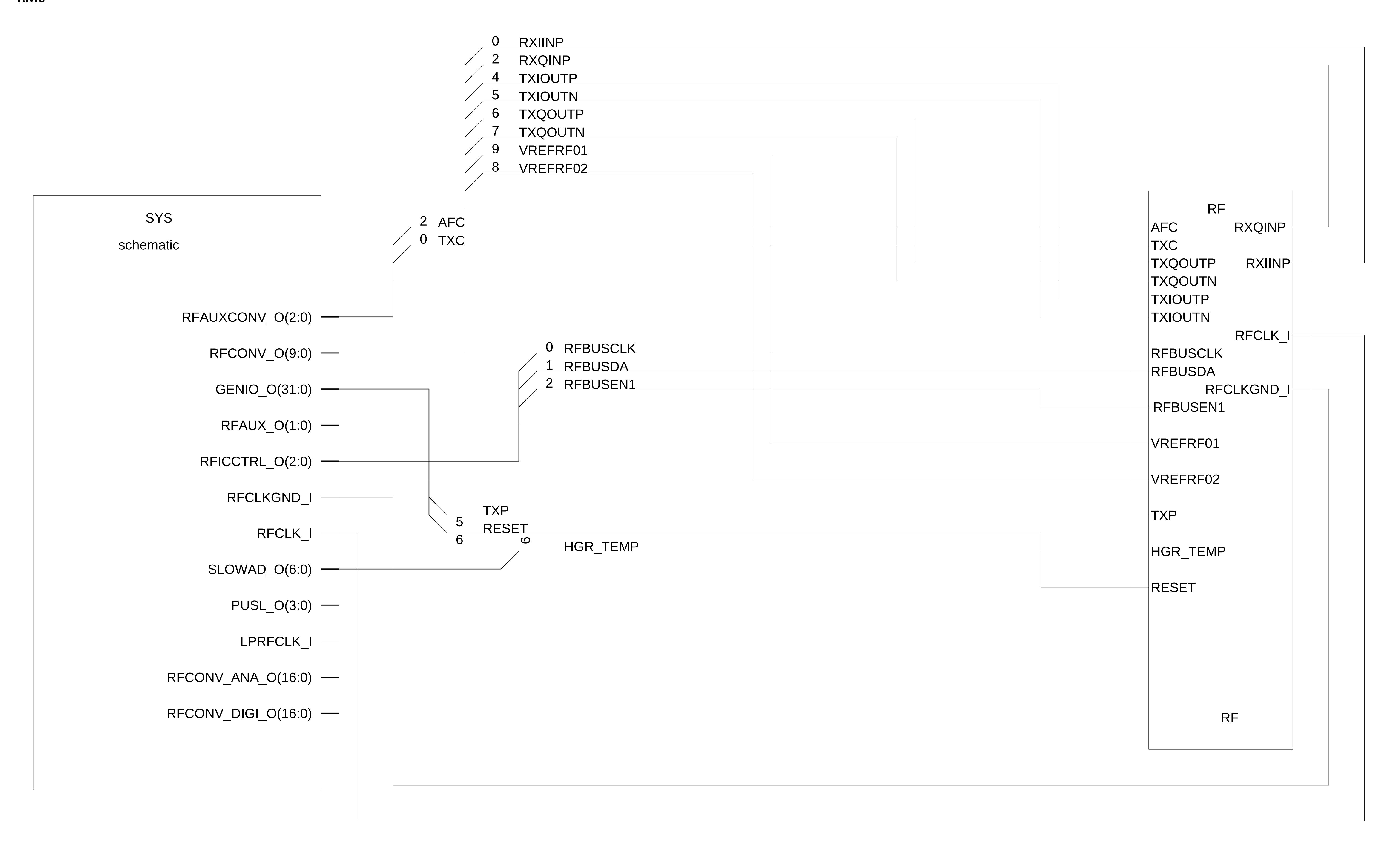
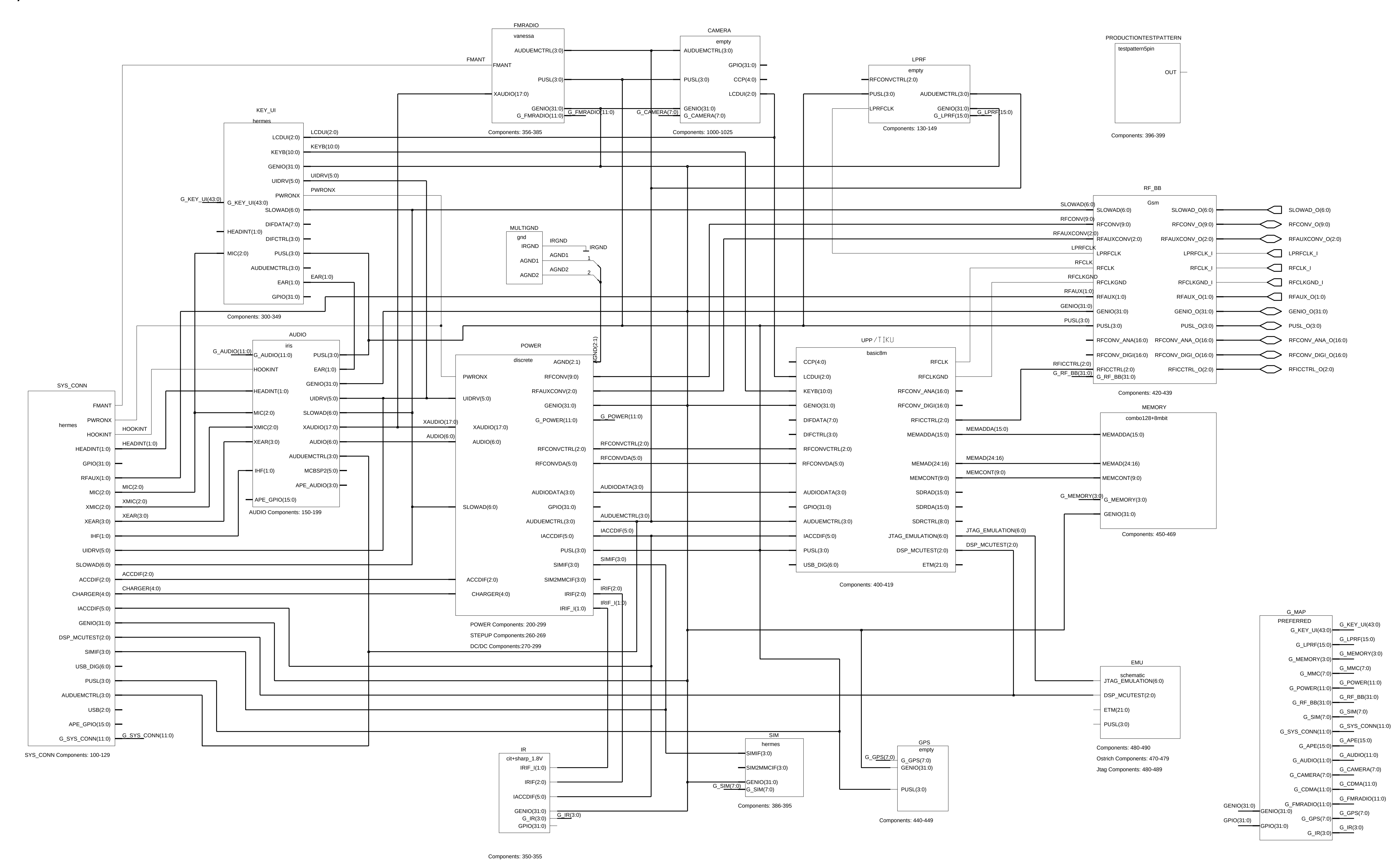
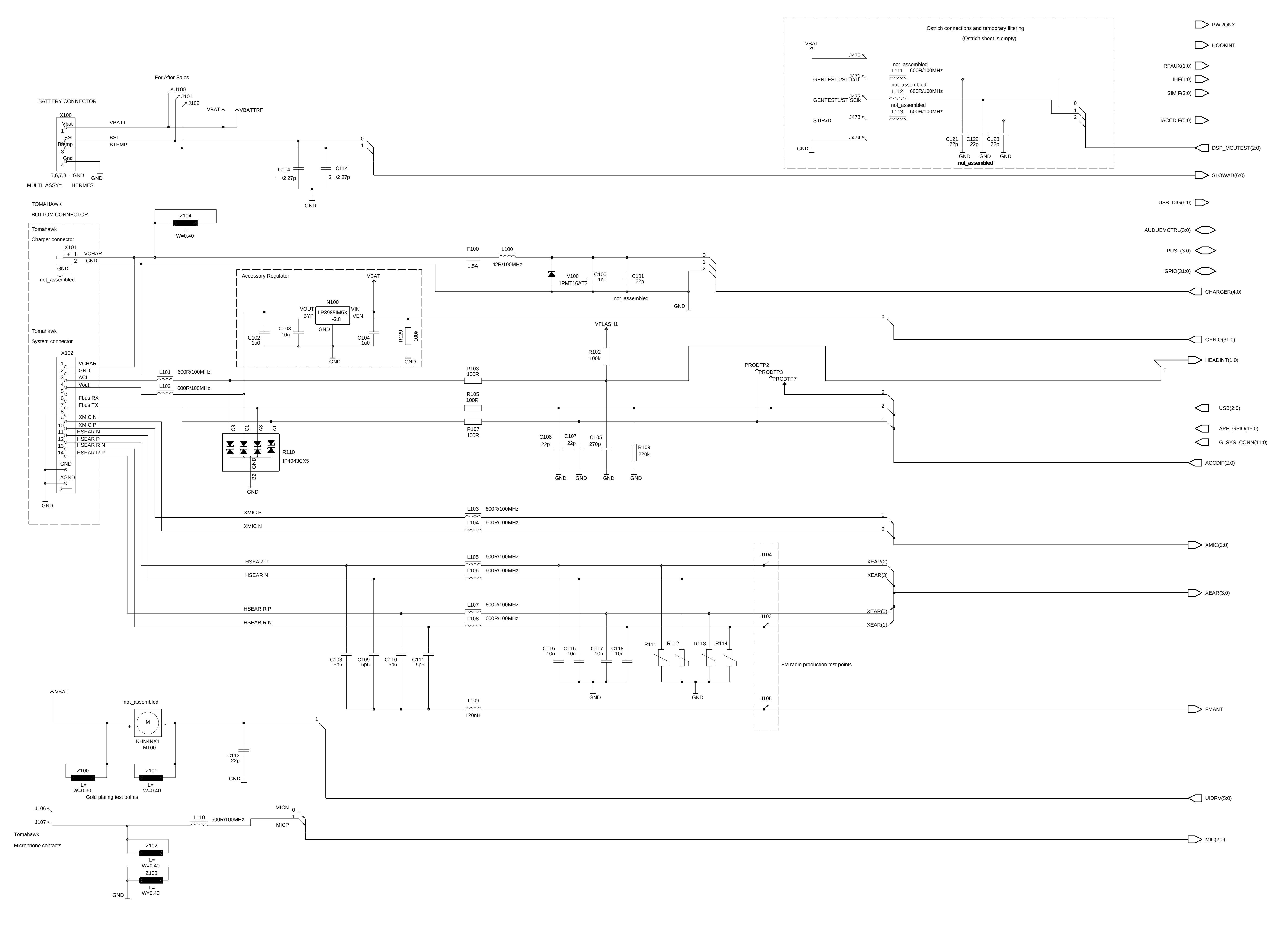

SYS
schematic
RFAUXCONV_O(2:0)
RFCONV_O(9:0)
GENIO_O(31:0)
RFAUX_O(1:0)
RFICCTRL_O(2:0)
RFCLKGND_I
RFCLK_I
SLOWAD_O(6:0)
PUSL_O(3:0)
LPRFCLK_I
RFCONV_ANA_O(16:0)
RFCONV_DIGI_O(16:0)
0 RXIINP
2 RXQINP
4 TXIOUTP
5 TXIOUTN
6 TXQOUTP
7 TXQOUTN
9 VREFRF01
8 VREFRF02
2 AFC
0 TXC
0 RFBUSCLK
1 RFBUSDA
2 RFBUSEN1
TXP
5 RESET
6
6 HGR_TEMP
RF
AFC
TXC
TXQOUTP
TXQOUTN
TXIOUTP
TXIOUTN
RFBUSCLK
RFBUSDA
RFBUSEN1
VREFRF01
VREFRF02
TXP
HGR_TEMP
RESET
RXQINP
RXIINP
RFCLK_I
RFCLKGND_I
RF

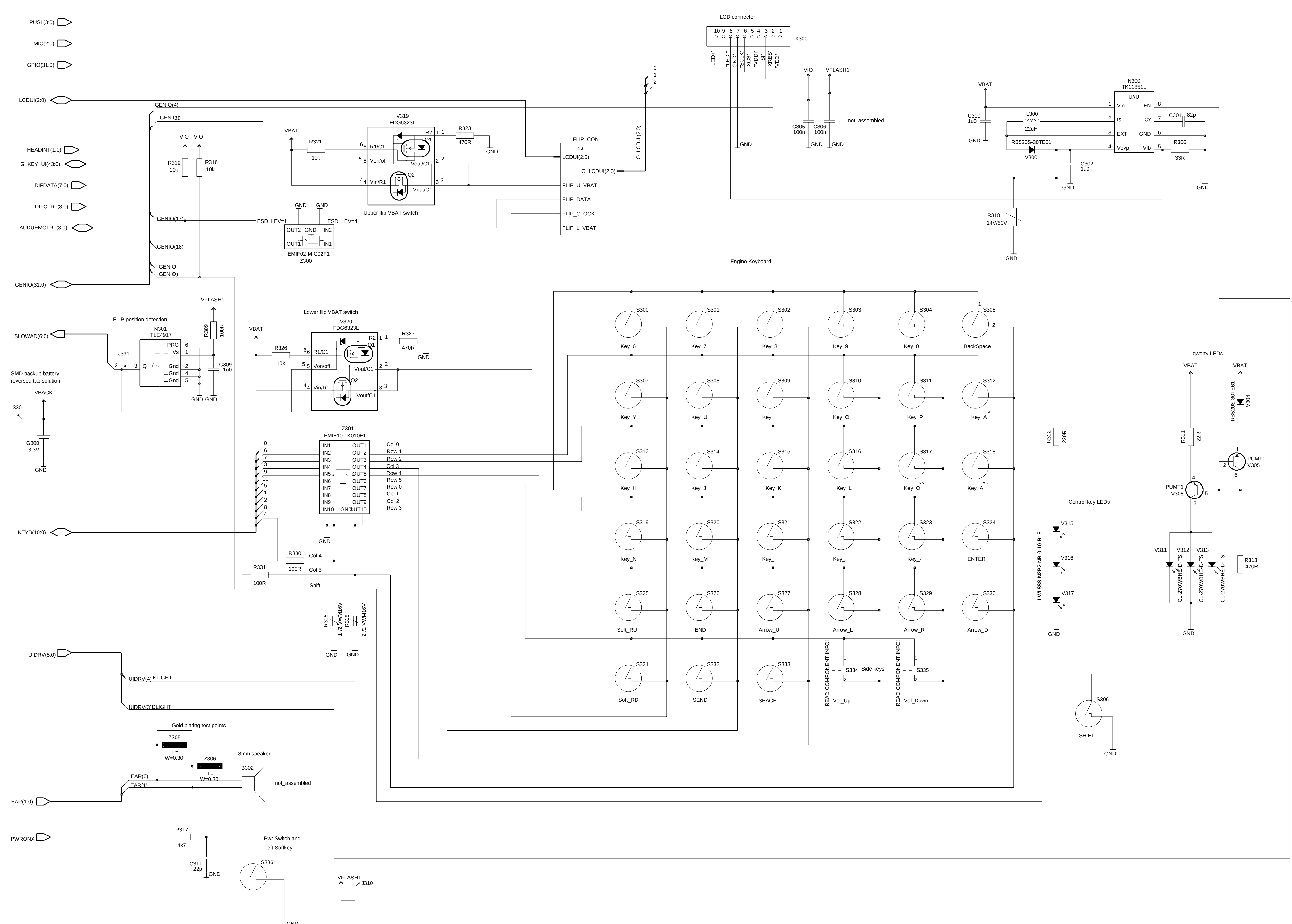
System


FMRADIO
vanessa
CAMERA
LPRF
PRODUCTIONTESTPATTERN
KEY_UI
hermes
MULTIGND
RF_BB
Gsm
AUDIO
iris
POWER
discrete
UPP
basic8m
MEMORY
combo128+8mbit
SYS_CONN
hermes
EMU
schematic
G_MAP
PREFERRED
SIM
hermes
GPS
IR
cit+sharp_1.8V
Components: 356-385
Components: 1000-1025
Components: 130-149
Components: 396-399
Components: 300-349
Components: 420-439
AUDIO Components: 150-199
Components: 400-419
Components: 450-469
POWER Components: 200-299
STEPUP Components:260-269
DC/DC Components:270-299
SYS_CONN Components: 100-129
Components: 480-490
Ostrich Components: 470-479
Jtag Components: 480-489
Components: 386-395
Components: 440-449
Components: 350-355

System Connector

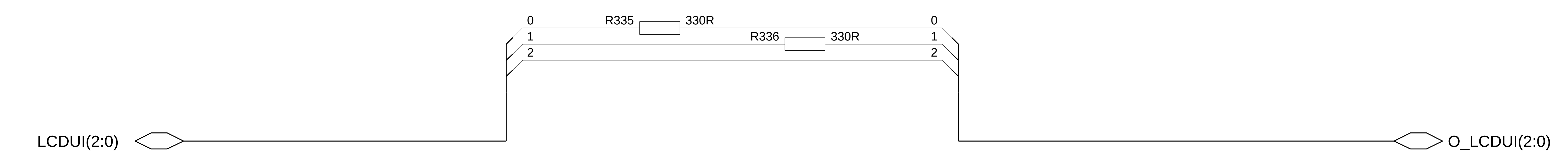


Key UI

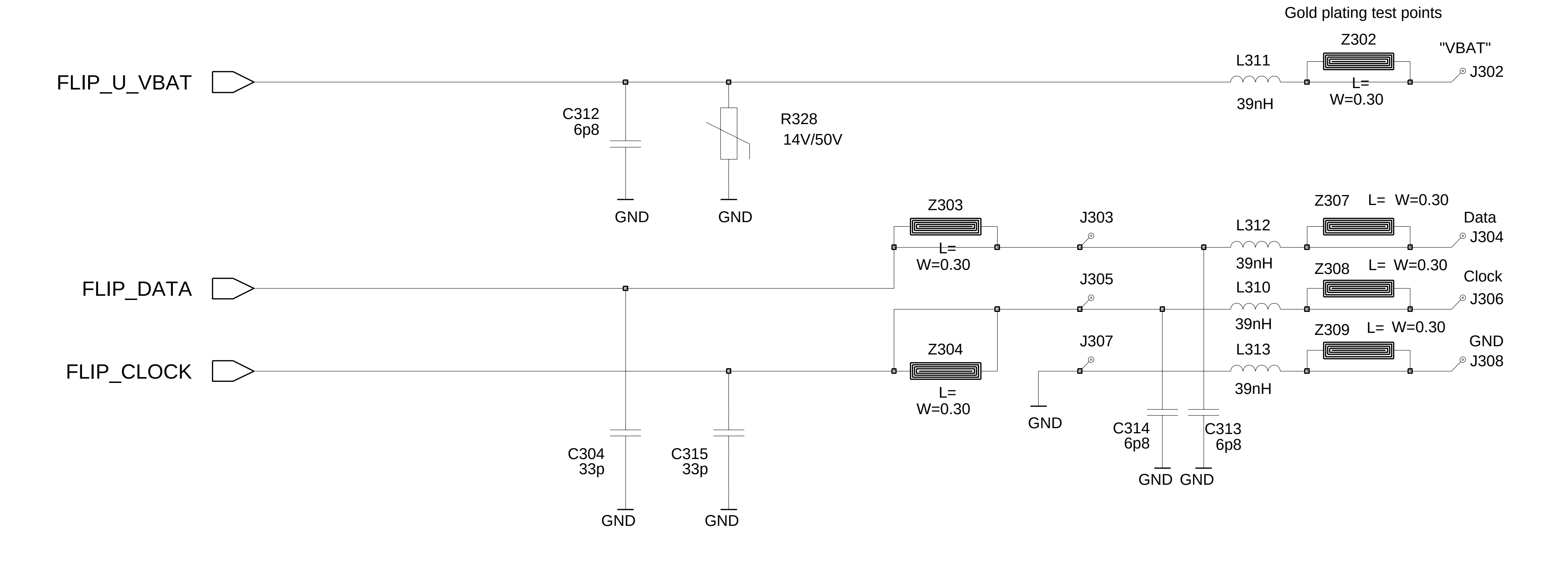


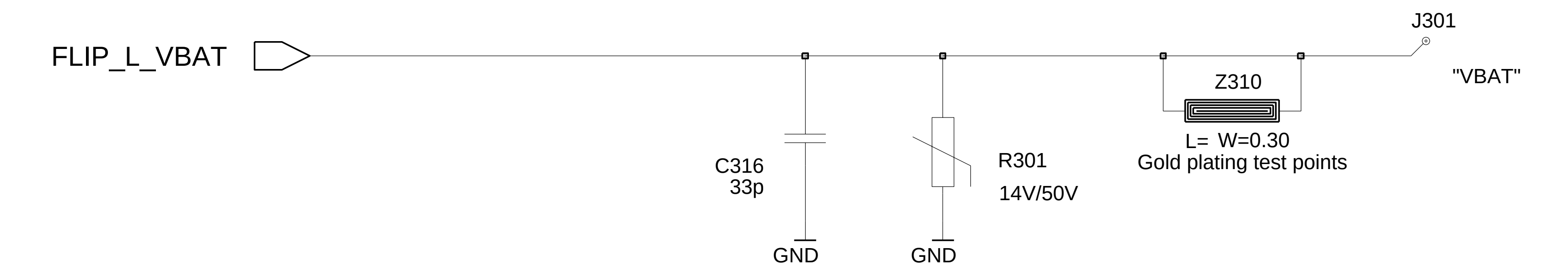
LCD connector
X300
FLIP_CON
Upper flip VBAT switch
Lower flip VBAT switch
FLIP position detection
SMD backup battery reversed tab solution
Engine Keyboard
qwerty LEDs
Control key LEDs
Side keys
Gold plating test points
8mm speaker
not_assembled
Pwr Switch and Left Softkey

Flip Connector

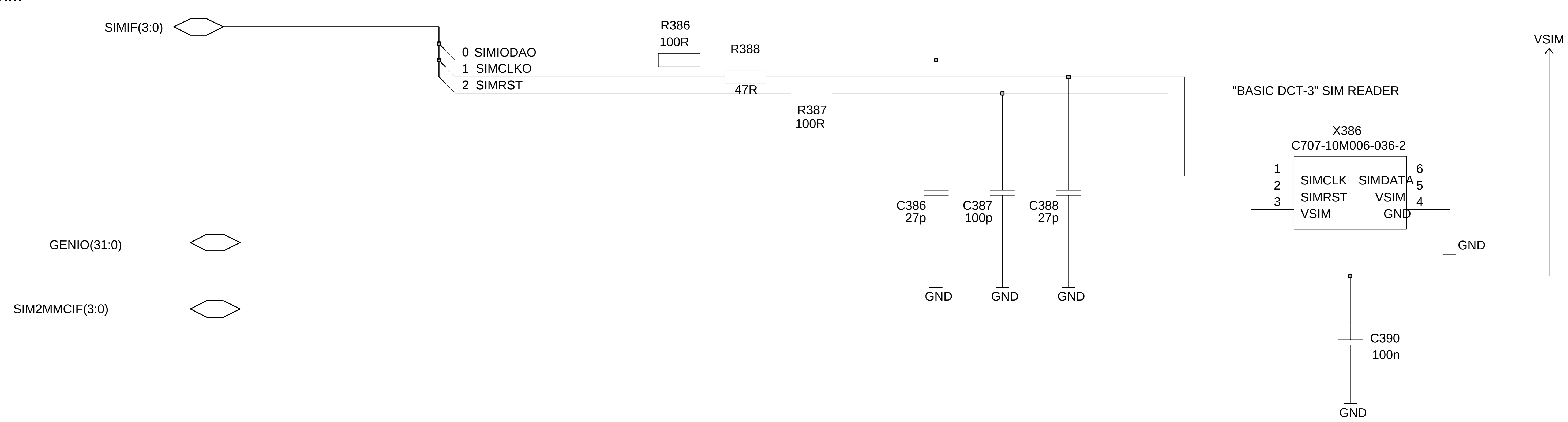


Flip connections



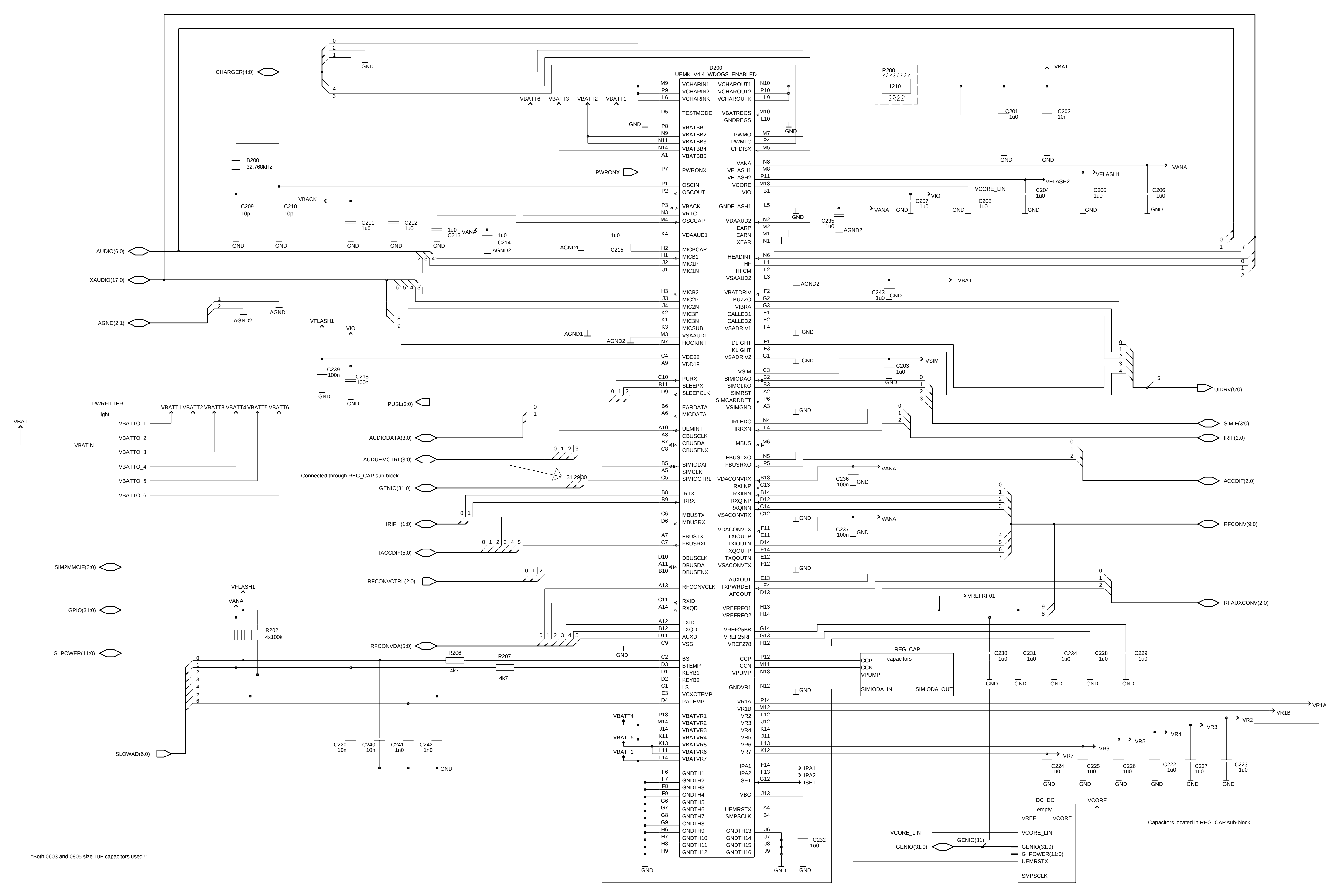


SIM


SIMIF(3:0)
0 SIMIODAO
1 SIMCLKO
2 SIMRST
R386
100R
R388
47R
R387
100R
C386
27p
C387
100p
C388
27p
GND
GND
GND
VSIM
"BASIC DCT-3" SIM READER
X386
C707-10M006-036-2
1
2
3
SIMCLK
SIMRST
VSIM
SIMDATA
VSIM
GND
6
5
4
GND
C390
100n
GND
GENIO(31:0)
SIM2MMCIF(3:0)

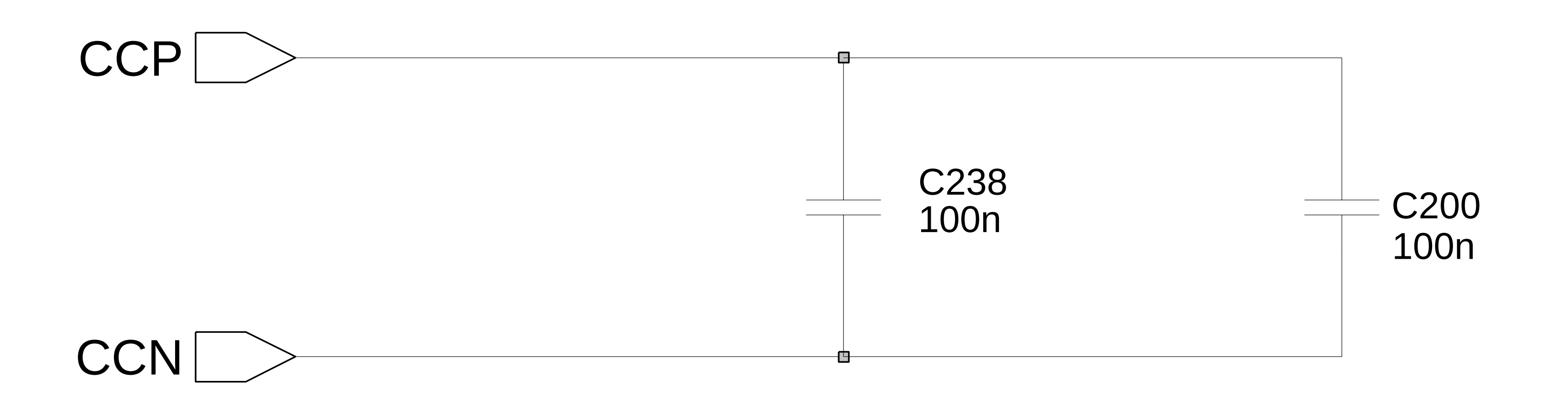
G_SIM(7:0)

Power

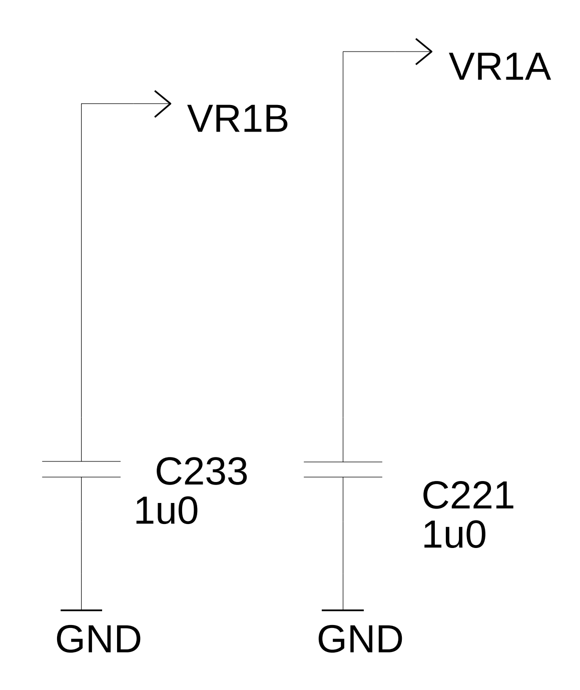

D200
UEMK_V4.4_WDOGS_ENABLED
CHARGER(4:0)
AUDIO(6:0)
XAUDIO(17:0)
AGND(2:1)
PWRFILTER
light
VBAT
VBATIN
VBATTO_1
VBATTO_2
VBATTO_3
VBATTO_4
VBATTO_5
VBATTO_6
SIM2MMCIF(3:0)
GPIO(31:0)
G_POWER(11:0)
SLOWAD(6:0)
PUSL(3:0)
AUDIODATA(3:0)
AUDUEMCTRL(3:0)
GENIO(31:0)
IRIF_I(1:0)
IACCDIF(5:0)
RFCONVCTRL(2:0)
RFCONVDA(5:0)
Connected through REG_CAP sub-block
B200
32.768kHz
R200
1210
0R22
R202
4x100k
R206
4k7
R207
4k7
UIDRV(5:0)
SIMIF(3:0)
IRIF(2:0)
ACCDIF(2:0)
RFCONV(9:0)
RFAUXCONV(2:0)
REG_CAP
capacitors
CCP
CCN
VPUMP
SIMIODA_IN
SIMIODA_OUT
DC_DC
empty
VREF
VCORE
VCORE_LIN
GENIO(31:0)
G_POWER(11:0)
UEMRSTX
SMPSCLK
VR1A
VR1B
VR2
VR3
VR4
VR5
VR6
VR7
IPA1
IPA2
ISET
Capacitors located in REG_CAP sub-block
"Both 0603 and 0805 size 1uF capacitors used !"
Used refs in REG_CAP: C238, C200, C219, C233, C221 and R205

Reg Cap

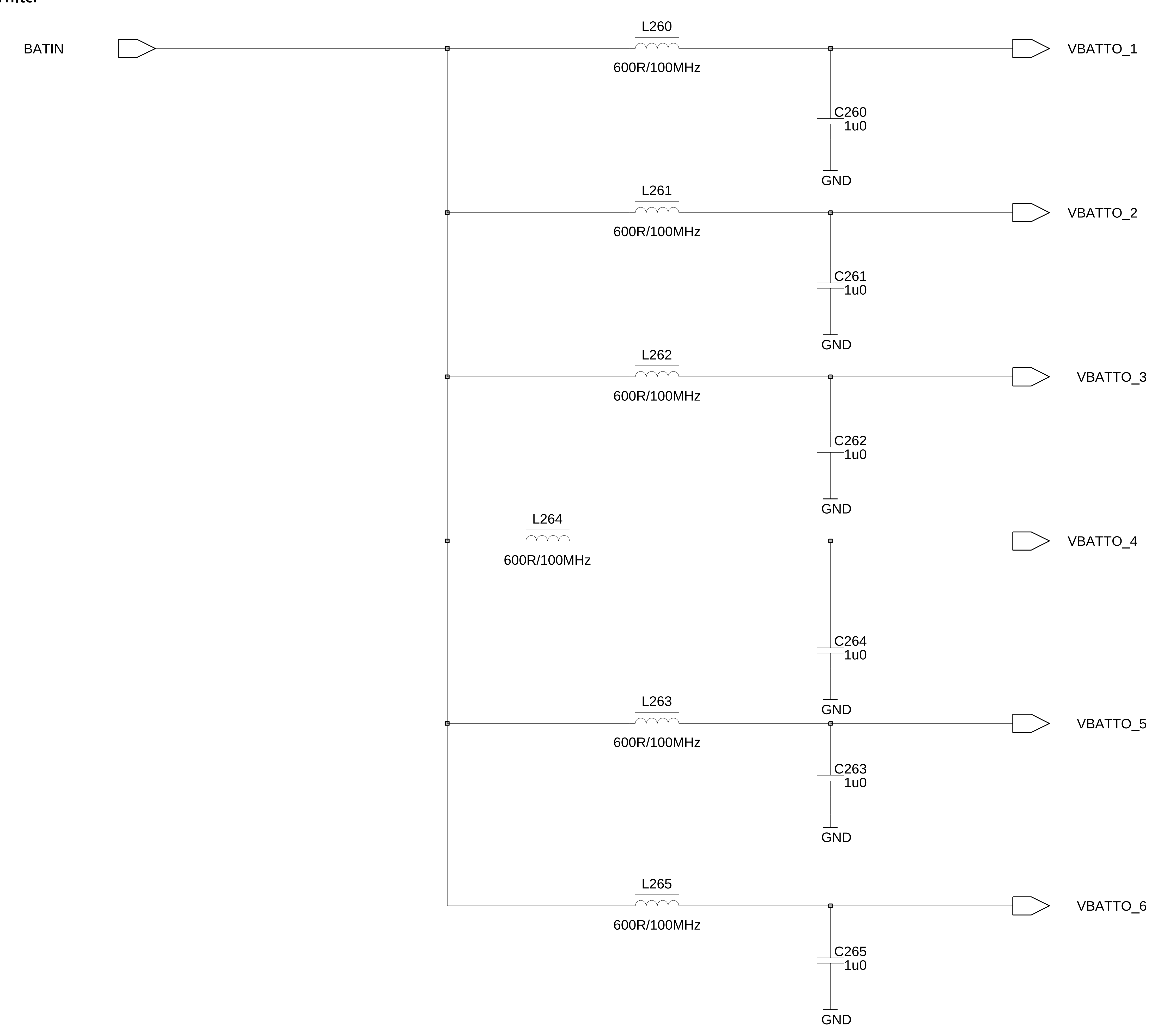

SIMIODA_IN
SIMIODA_OUT


CCP
C238
100n
C200
100n
CCN

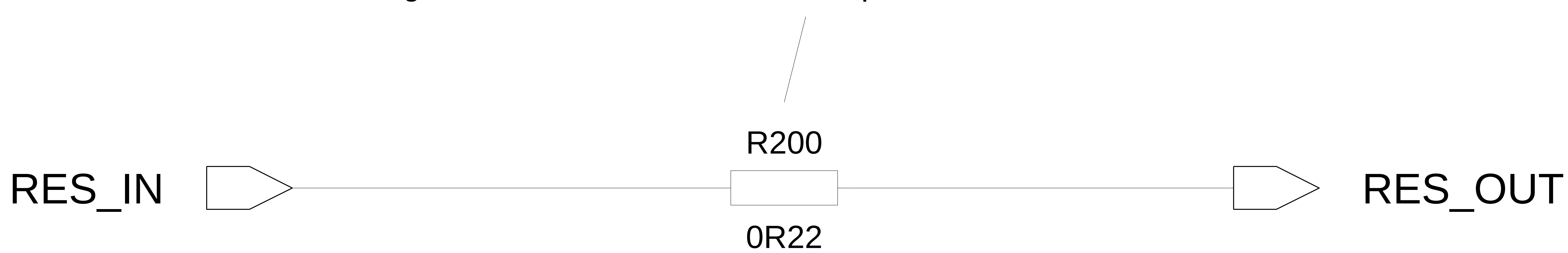

VPUMP
1u0
C219
GND


VR1A
VR1B
C233
1u0
C221
1u0
GND
GND

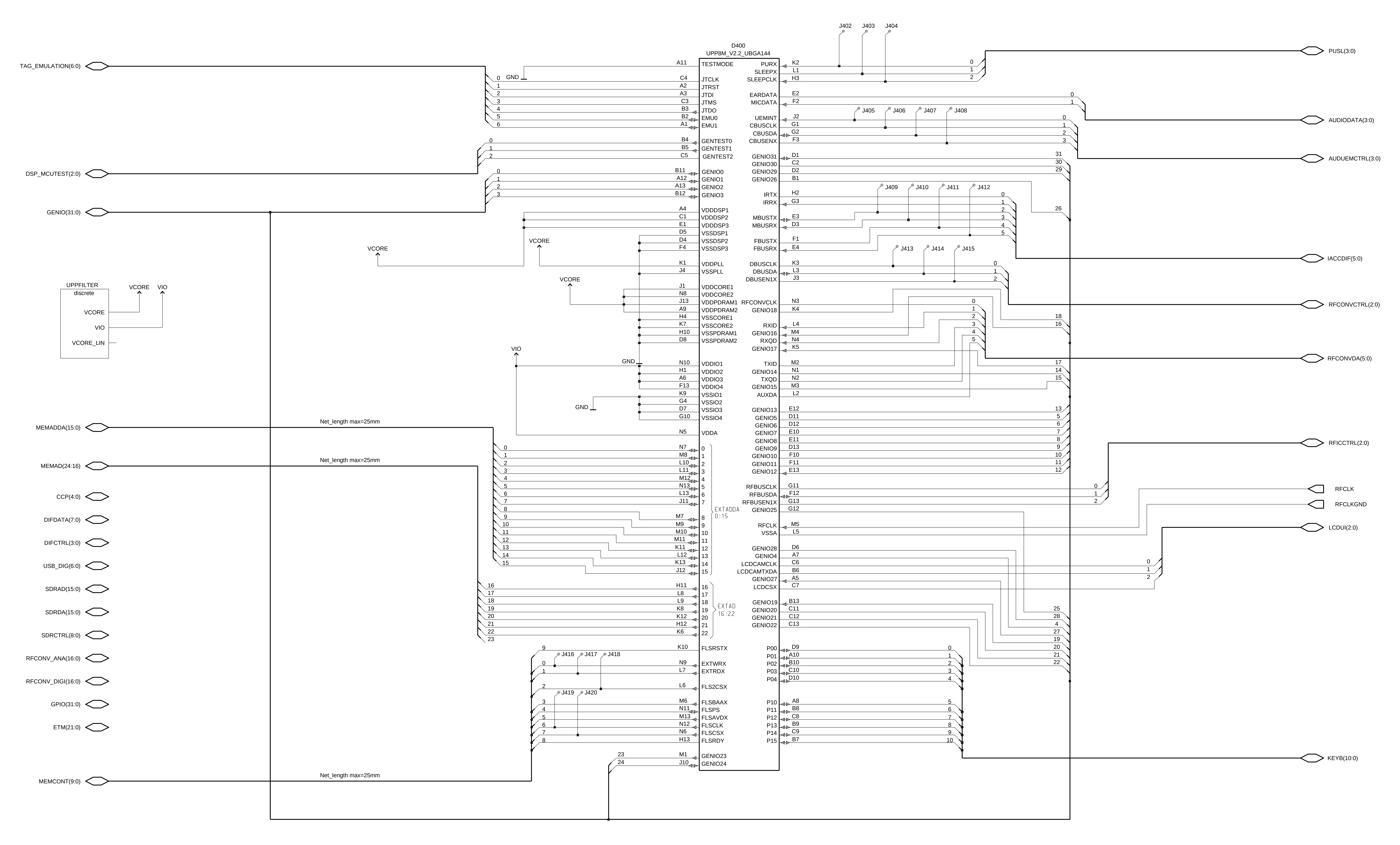
Powerfilter



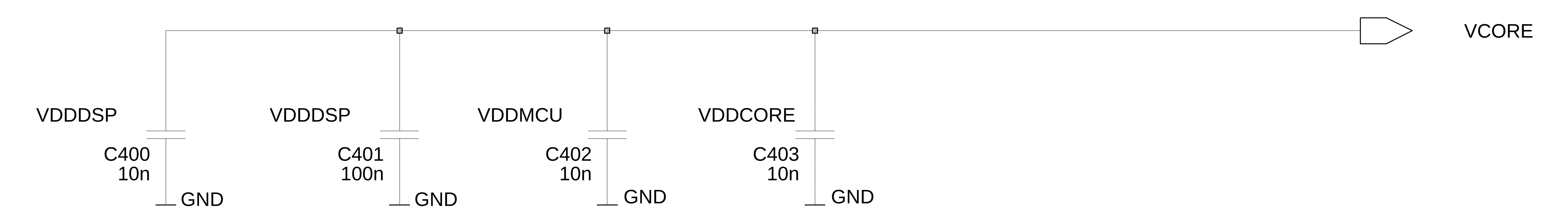
R200


Will be changed to reference number in viewpoint
R200
RES_IN
RES_OUT
0R22

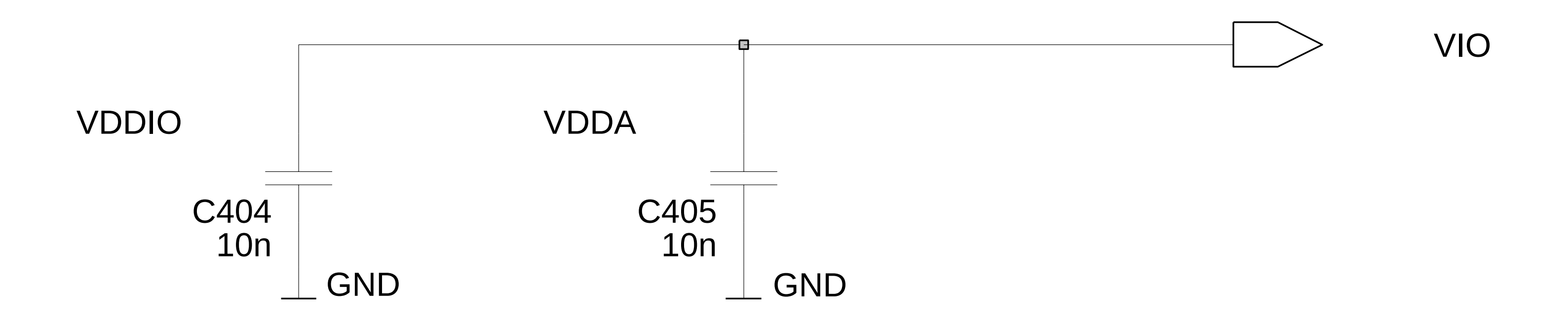
UPP



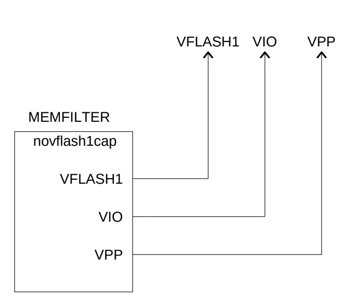
UPP Filter



VCORE_LIN



Memory



MEMEXTENSION
empty
MEMADDA(15:0)
MEMAD(24:16)
MEMCONT(9:0)
GENIO(31:0)
G_MEMORY(3:0)
FLS2CSX

MEMWING
empty
GENIO(31:0)
G_MEMORY(3:0)
MEMAD(24:16)
MEMADDA(15:0)
MEMCONT(9:0)
FLS2CSX
FLSCSX

GENIO(31:0)
23

D450
NMP_DCT4_128MNOR_8MSRAM
FLASHM 8Mx16
SRAM 512kx16
MEMAD(16) B2
MEMAD(17) A9
MEMAD(18) B8
MEMAD(19) A8
MEMAD(20) B3
16 A 20
FLASH/SRAM
MEMAD(21) A2 A21/_LB
MEMAD(22) A10 A22/_UB
B7 _WP/_CS
FLASH
MEMCONT(6) A4 CLK
MEMCONT(9) B6 _RESET
B9 _CEF
RDY A1
NC 1 E451
NC 2 E452
NC 3 E453
NC 4 E454
NC 5 E455
NC 6 E456
NC 7 E457
NC 8 E458
COMMON
MEMCONT(5) B4 _AVD
MEMCONT(0) A6 _WE
MEMCONT(1) C10 _OE
MEMCONT(4) B5 PS
D10
ADDRESS/DATA I/O
0
1 D9
2 C7
3 C6
4 D5
5 D4
6 C3
7 C2
8 C9
9 C8
10 D7
11 D6
12 C5
13 C4
14 D2
15 D1
A5,B1,D8= VIO
A7= VPP
A3,B10,C1,D3= GND

MEMAD(24:16)

VPP
PRODTP6
MEMCONT(3)
R450
4k7
E450
2

MEMCONT(9:0)
MEMCONT(8)

MEMADDA(15:0)

G_MEMORY(3:0)

Memory Wing

MEMADDA(15:0)

MEMAD(24:16)

GENIO(31:0)

G_MEMORY(3:0)

FLS2CSX

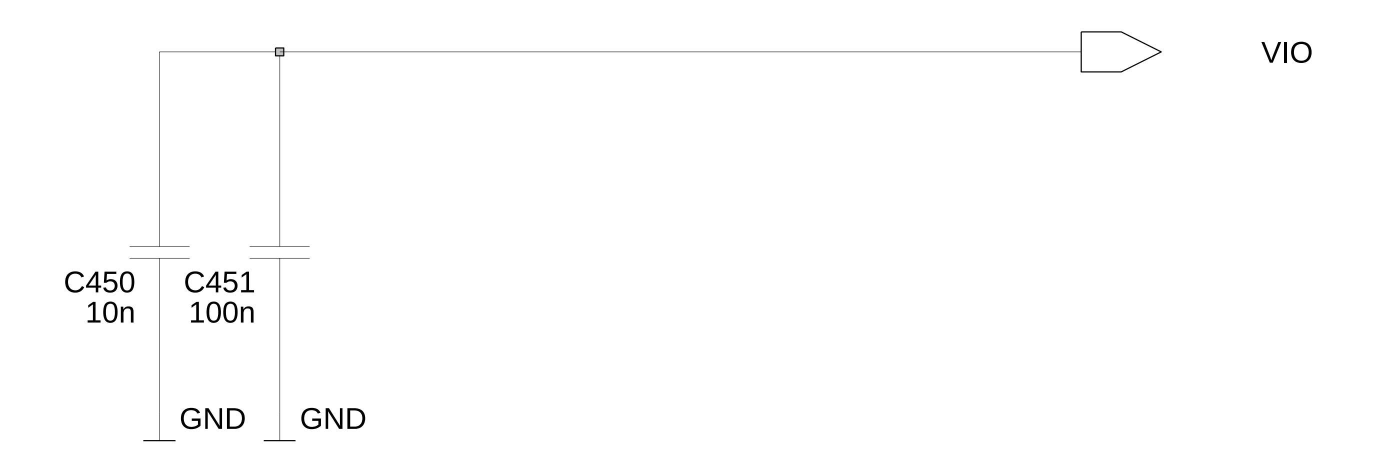
2

7

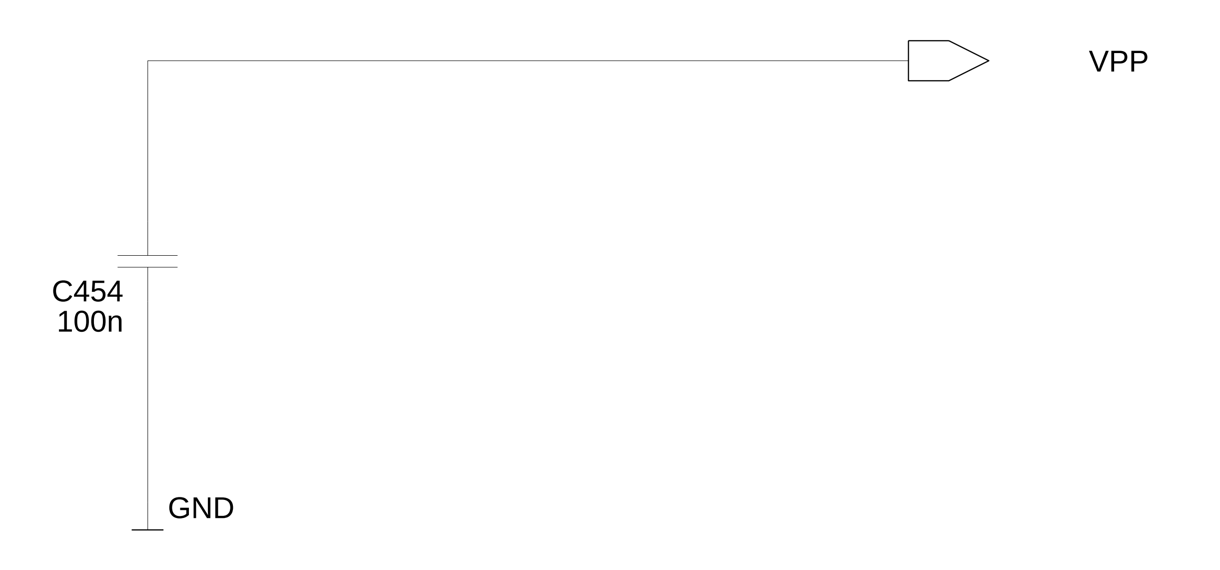
FLSCSX

MEMCONT(9:0)

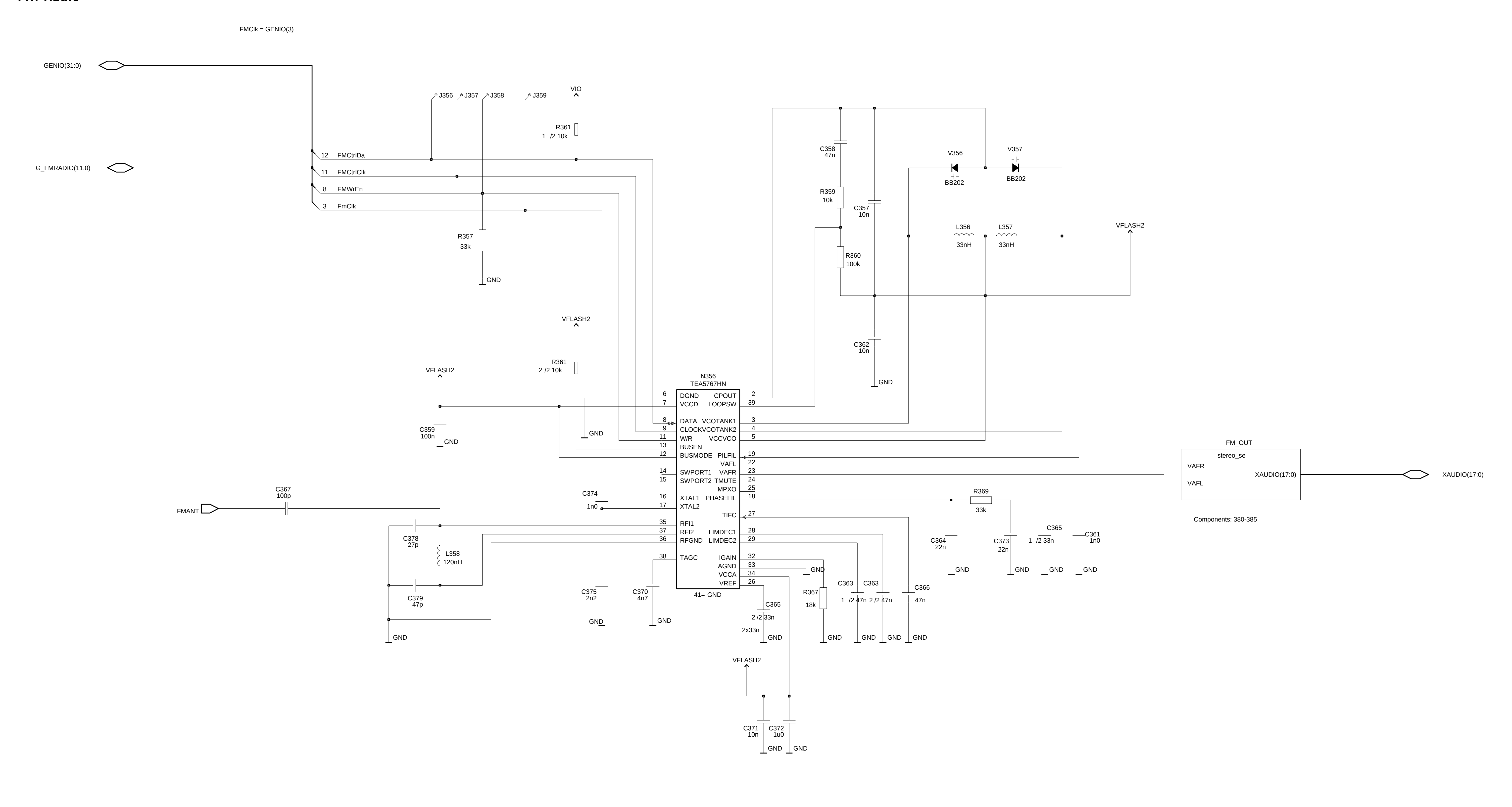
Memory Filter



VFLASH1



FM Radio


FMClk = GENIO(3)
GENIO(31:0)
G_FMRADIO(11:0)
12 FMCtrlDa
11 FMCtrlClk
8 FMWrEn
3 FmClk
J356 J357 J358 J359
VIO
R361 1 /2 10k
R357 33k
GND
VFLASH2
R361 2 /2 10k
C359 100n
N356 TEA5767HN
DGND VCCD DATA CLOCK W/R BUSEN BUSMODE SWPORT1 SWPORT2 XTAL1 XTAL2 RFI1 RFI2 RFGND TAGC
CPOUT LOOPSW VCOTANK1 VCOTANK2 VCCVCO PILFIL VAFL VAFR TMUTE MPXO PHASEFIL TIFC LIMDEC1 LIMDEC2 IGAIN AGND VCCA VREF
41= GND
C358 47n
R359 10k
C357 10n
R360 100k
C362 10n
V356 V357 BB202 BB202
L356 33nH L357 33nH
FMANT
C367 100p
C378 27p
L358 120nH
C379 47p
C374 1n0
C375 2n2
C370 4n7
C365 2 /2 33n
2x33n
R367 18k
C363 1 /2 47n C363 2 /2 47n
C366 47n
C371 10n C372 1u0
R369 33k
C364 22n
C373 22n
C365 1 /2 33n
C361 1n0
FM_OUT
stereo_se
VAFR VAFL
XAUDIO(17:0)
Components: 380-385
AUDUEMCTRL(3:0)
PUSL(3:0)
Notice:
C374 (1n0) and C375 (2n2) are configured for 32kHz reference clock
If reference clock is 6.5MHz, use C374 (3p9) and C375 (10p)

FM Out

XAUDIO(17:0)

FM_RADIO L

VAFL

XAUDIO(10)

FM_RADIO R

AFR

XAUDIO(11)

G_CAMERA(7:0)

AUDUEMCTRL(3:0)

LCDUI(2:0)

GENIO(31:0)

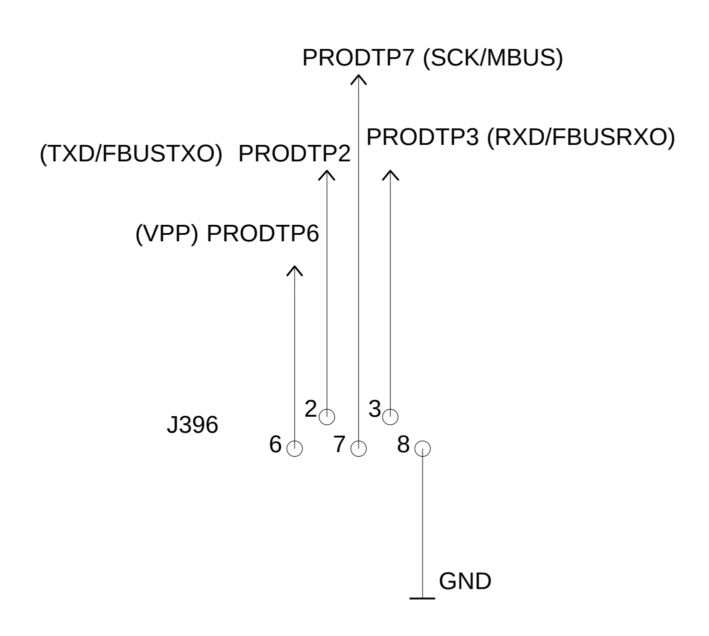
CCP(4:0)

GPIO(31:0)

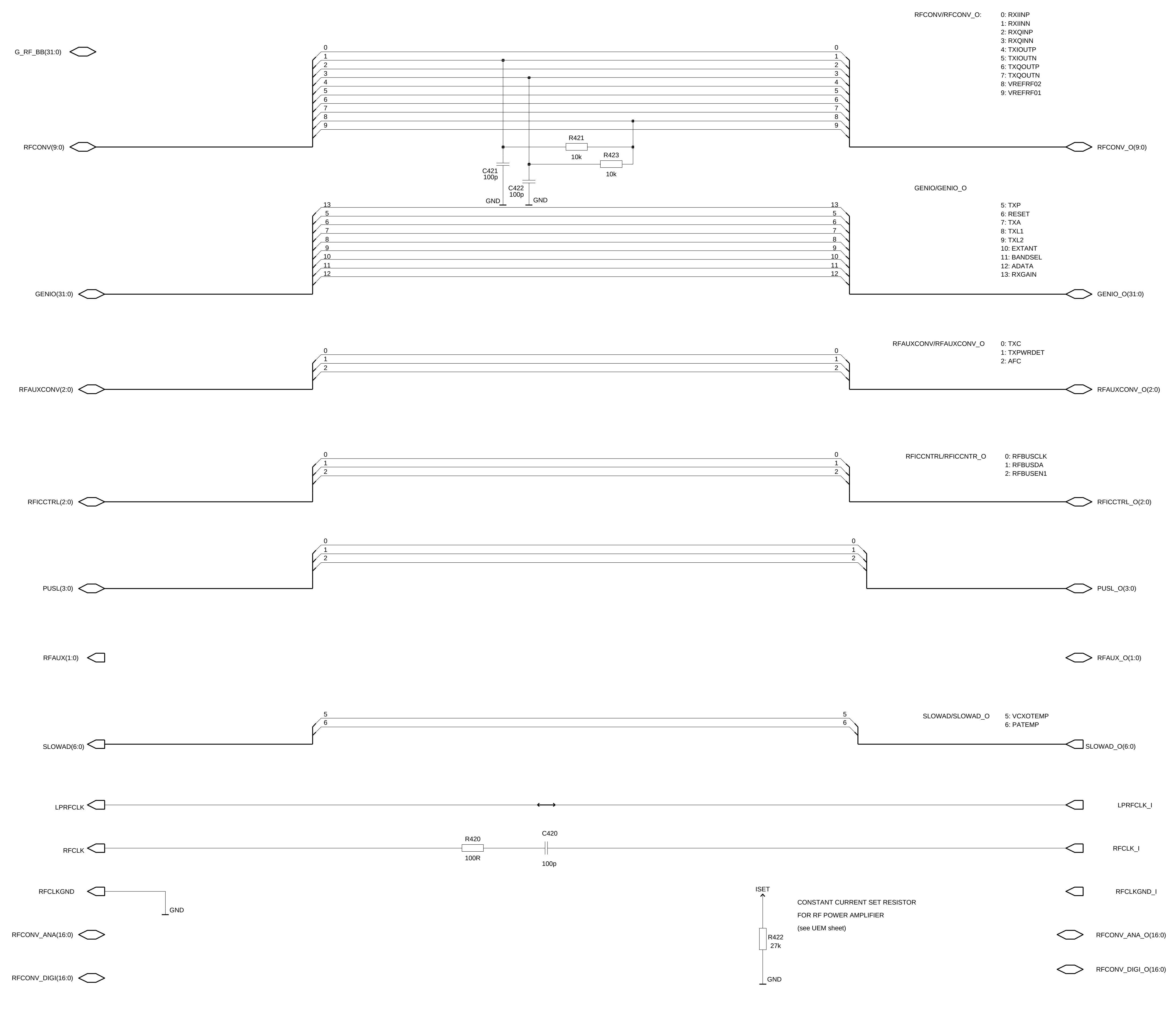
PUSL(3:0)

Production Testpattern

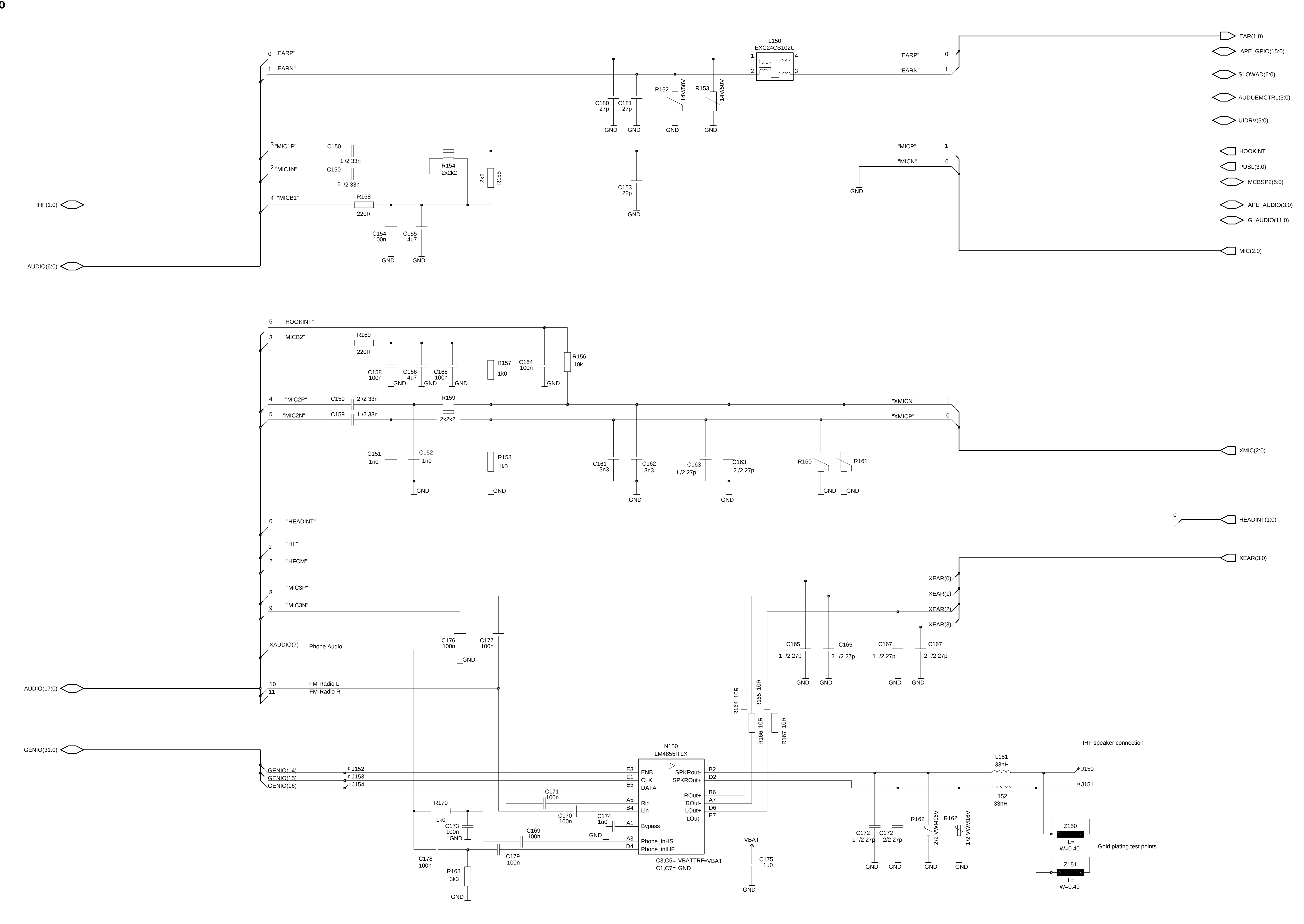
OUT



RF and BB

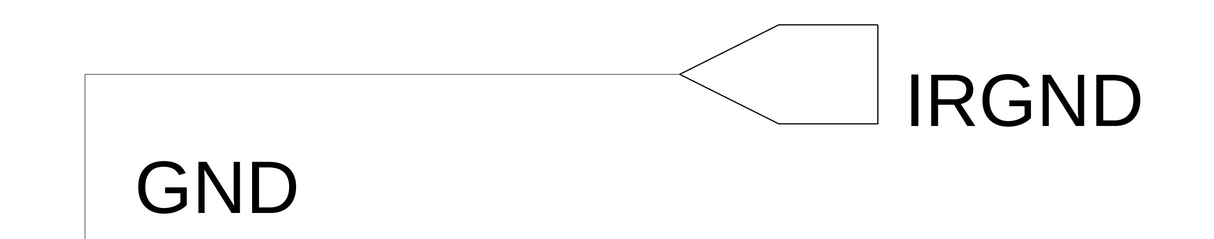

G_RF_BB(31:0)
RFCONV(9:0)
RFCONV_O(9:0)
RFCONV/RFCONV_O:
0: RXIINP
1: RXIINN
2: RXQINP
3: RXQINN
4: TXIOUTP
5: TXIOUTN
6: TXQOUTP
7: TXQOUTN
8: VREFRF02
9: VREFRF01
R421
10k
R423
10k
C421
100p
C422
100p
GND
GENIO/GENIO_O
5: TXP
6: RESET
7: TXA
8: TXL1
9: TXL2
10: EXTANT
11: BANDSEL
12: ADATA
13: RXGAIN
GENIO(31:0)
GENIO_O(31:0)
RFAUXCONV/RFAUXCONV_O
0: TXC
1: TXPWRDET
2: AFC
RFAUXCONV(2:0)
RFAUXCONV_O(2:0)
RFICCNTRL/RFICCNTR_O
0: RFBUSCLK
1: RFBUSDA
2: RFBUSEN1
RFICCTRL(2:0)
RFICCTRL_O(2:0)
PUSL(3:0)
PUSL_O(3:0)
RFAUX(1:0)
RFAUX_O(1:0)
SLOWAD/SLOWAD_O
5: VCXOTEMP
6: PATEMP
SLOWAD(6:0)
SLOWAD_O(6:0)
LPRFCLK
LPRFCLK_I
R420
100R
C420
100p
RFCLK
RFCLK_I
RFCLKGND
RFCLKGND_I
ISET
CONSTANT CURRENT SET RESISTOR
FOR RF POWER AMPLIFIER
(see UEM sheet)
R422
27k
RFCONV_ANA(16:0)
RFCONV_ANA_O(16:0)
RFCONV_DIGI(16:0)
RFCONV_DIGI_O(16:0)
IF IPA1 AND IPA2 ARE USED BY RF THE TOLERANCE HAS TO BE 1% (0402, 1430873)

Audio



L150
EXC24CB102U
"EARP"
"EARN"
EAR(1:0)
APE_GPIO(15:0)
SLOWAD(6:0)
AUDUEMCTRL(3:0)
UIDRV(5:0)
HOOKINT
PUSL(3:0)
MCBSP2(5:0)
APE_AUDIO(3:0)
G_AUDIO(11:0)
MIC(2:0)
C180 27p
C181 27p
R152 14V/50V
R153 14V/50V
GND
"MIC1P"
"MIC1N"
"MICB1"
"MICP"
"MICN"
C150 1 /2 33n
C150 2 /2 33n
R154 2x2k2
R155 2k2
R168 220R
C153 22p
C154 100n
C155 4u7
IHF(1:0)
AUDIO(6:0)
"HOOKINT"
"MICB2"
R169 220R
C158 100n
C166 4u7
C168 100n
R157 1k0
C164 100n
R156 10k
"MIC2P"
"MIC2N"
C159 2 /2 33n
C159 1 /2 33n
R159 2x2k2
"XMICN"
"XMICP"
C151 1n0
C152 1n0
R158 1k0
C161 3n3
C162 3n3
C163 1 /2 27p
C163 2 /2 27p
R160
R161
XMIC(2:0)
"HEADINT"
HEADINT(1:0)
"HF"
"HFCM"
XEAR(3:0)
XEAR(0)
XEAR(1)
XEAR(2)
XEAR(3)
"MIC3P"
"MIC3N"
C176 100n
C177 100n
XAUDIO(7)
Phone Audio
C165 1 /2 27p
C165 2 /2 27p
C167 1 /2 27p
C167 2 /2 27p
AUDIO(17:0)
FM-Radio L
FM-Radio R
R164 10R
R165 10R
R166 10R
R167 10R
GENIO(31:0)
GENIO(14)
GENIO(15)
GENIO(16)
J152
J153
J154
N150
LM4855ITLX
ENB
CLK
DATA
Rin
Lin
Bypass
Phone_inHS
Phone_inIHF
SPKRout-
SPKROut+
ROut+
ROut-
LOut+
LOut-
E3 E1 E5 A5 B4 A1 A3 D4
B2 D2 B6 A7 D6 E7
C3,C5= VBATTRF=VBAT
C1,C7= GND
C171 100n
C170 100n
C174 1u0
C169 100n
R170 1k0
C173 100n
C178 100n
C179 100n
R163 3k3
VBAT
C175 1u0
IHF speaker connection
L151 33nH
L152 33nH
J150
J151
C172 1 /2 27p
C172 2/2 27p
R162 2/2 VWM16V
R162 1/2 VWM16V
Z150
Z151
L=
W=0.40
Gold plating test points

Multi GND



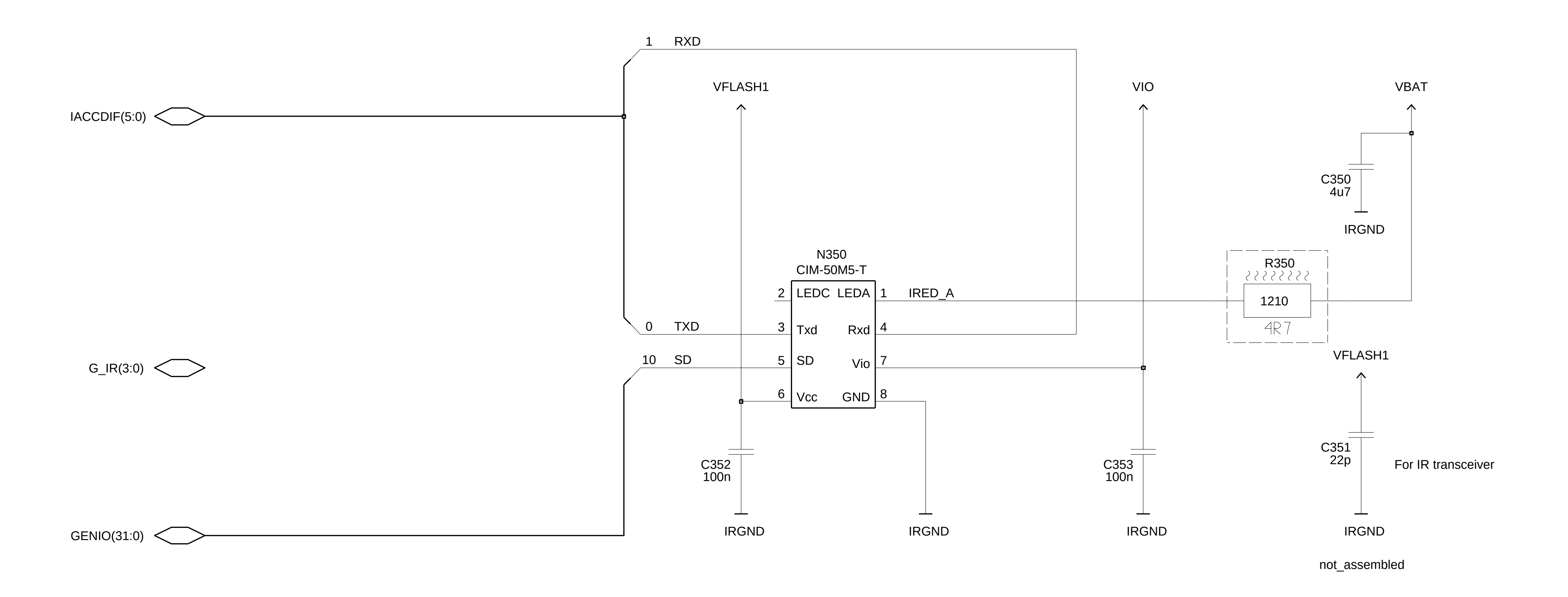
AGND1

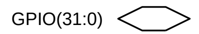
GND

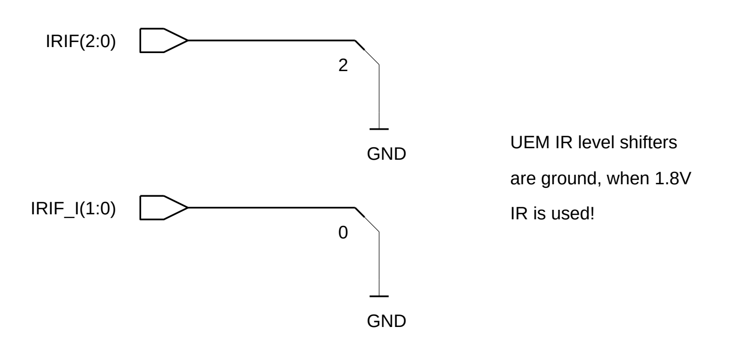
AGND2

GND

IR





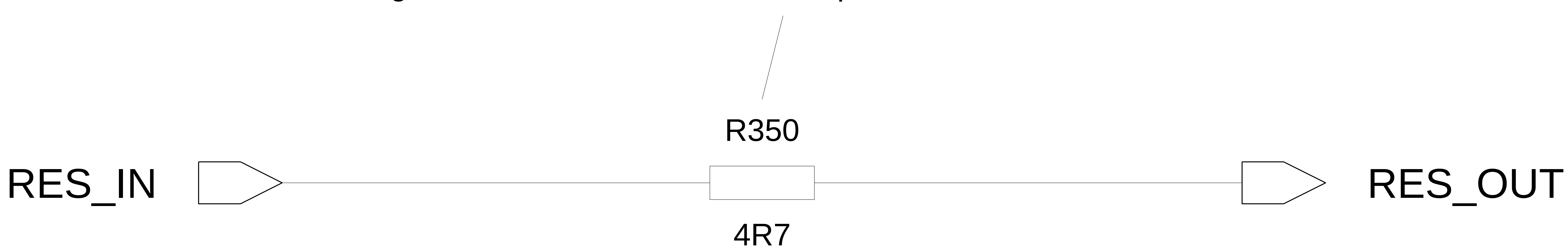


UEM IR level shifters
are ground, when 1.8V
IR is used!

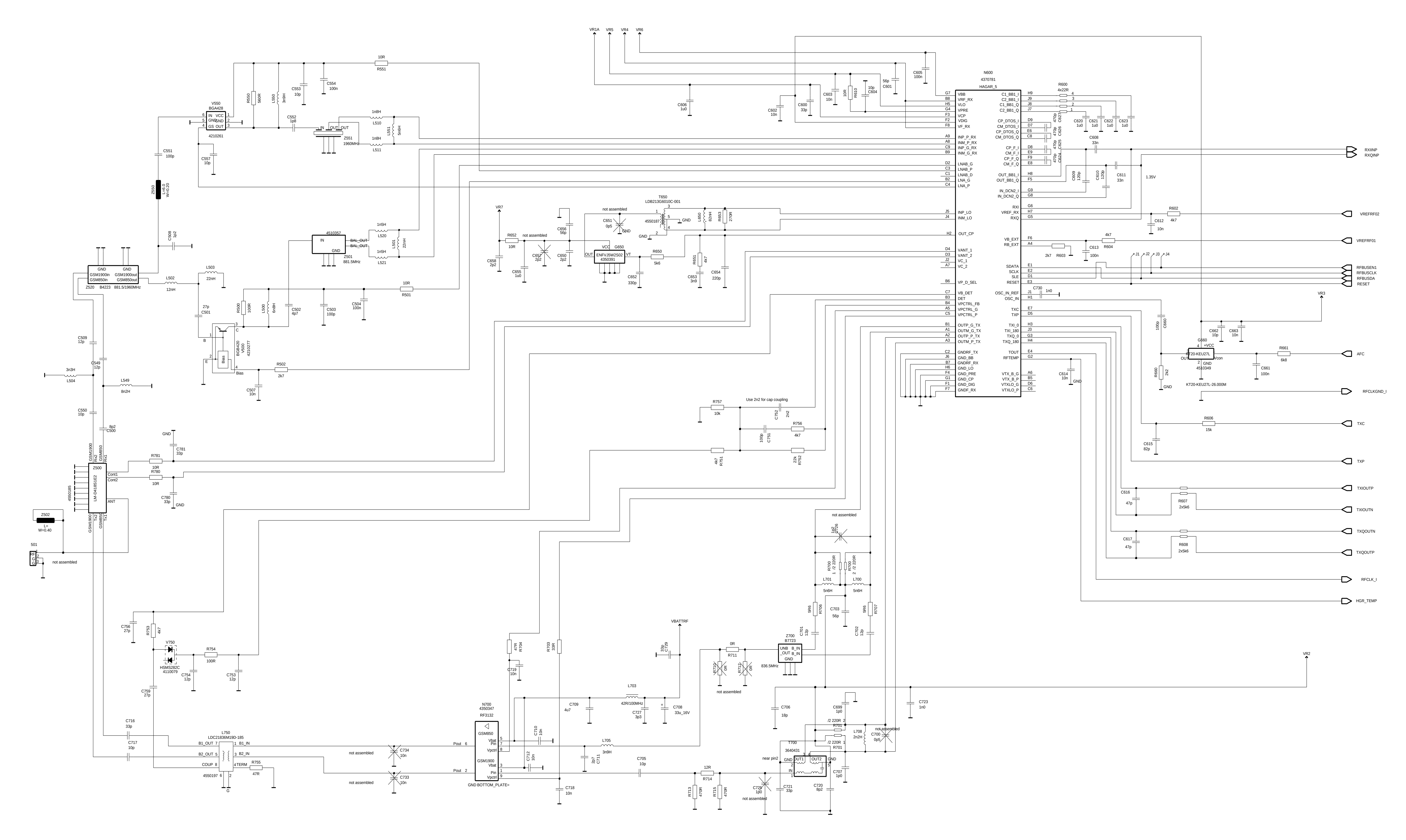
Used referenses

C	350 - 353
N	350
R	350

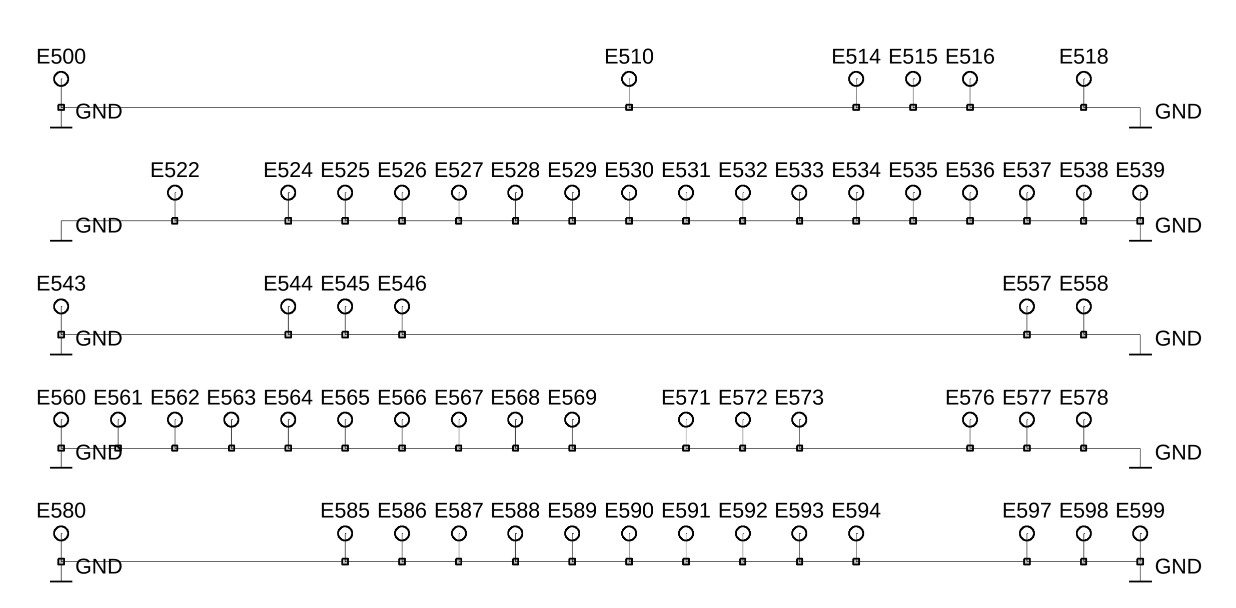
R350

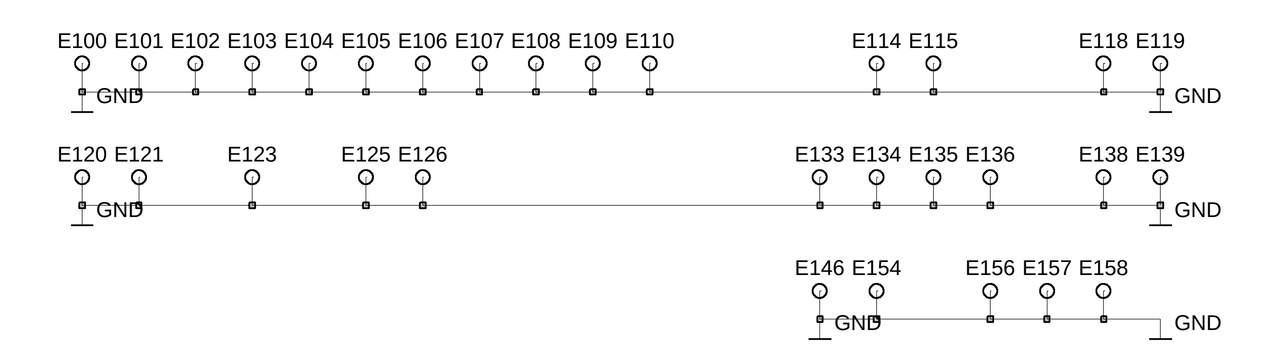

Will be changed to reference number in viewpoint
R350
RES_IN
RES_OUT
4R7

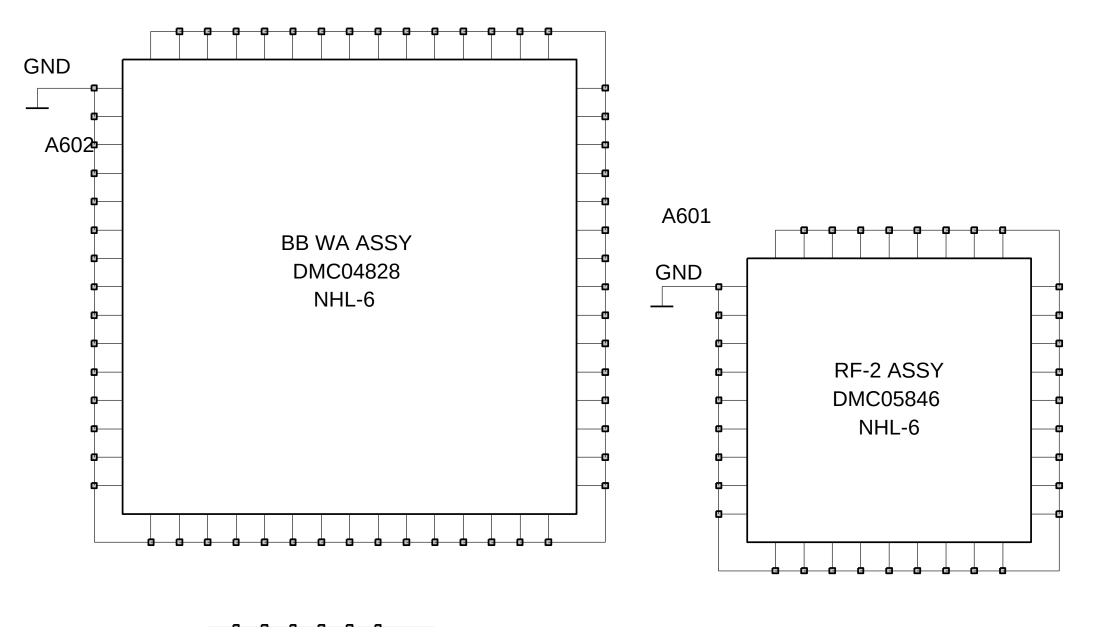
RF

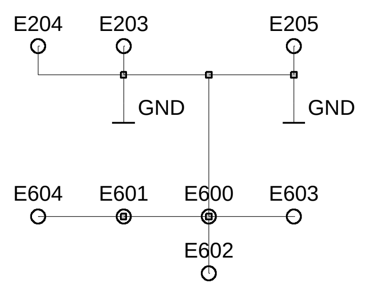


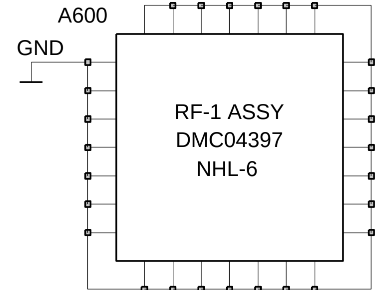
Shields


RF GLOBAL GND HOLES
E500 E510 E514 E515 E516 E518
GND GND
E522 E524 E525 E526 E527 E528 E529 E530 E531 E532 E533 E534 E535 E536 E537 E538 E539
GND GND
E543 E544 E545 E546 E557 E558
GND GND
E560 E561 E562 E563 E564 E565 E566 E567 E568 E569 E571 E572 E573 E576 E577 E578
GND GND
E580 E585 E586 E587 E588 E589 E590 E591 E592 E593 E594 E597 E598 E599
GND GND

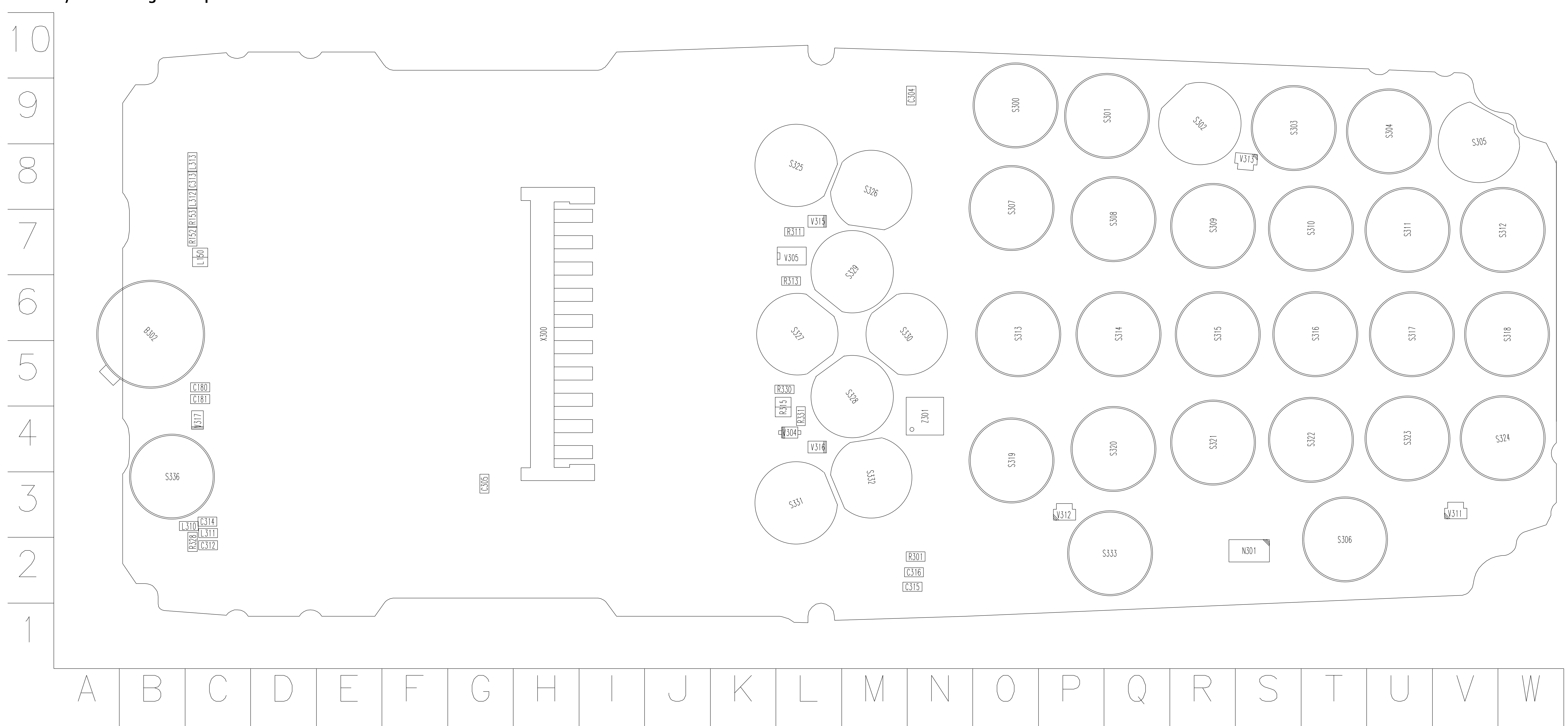

SYSTEM GLOBAL GND HOLES
E100 E101 E102 E103 E104 E105 E106 E107 E108 E109 E110 E114 E115 E118 E119
GND GND
E120 E121 E123 E125 E126 E133 E134 E135 E136 E138 E139
GND GND
E146 E154 E156 E157 E158
GND GND


GND
A602
BB WA ASSY
DMC04828
NHL-6
A601
GND
RF-2 ASSY
DMC05846
NHL-6


E204 E203 E205
GND GND
E604 E601 E600 E603
E602


A600
GND
RF-1 ASSY
DMC04397
NHL-6

Assembly Values Diagram Top



Assembly Values Diagram Bottom

